

In re Appln. of Charles LOVE  
Application No. 09/793,597

*TITLE AMENDMENTS*

Replace the title with:

~~POROUS STRUCTURES AND METHODS AND APPARATUS FOR~~ OF FORMING  
~~POROUS STRUCTURES~~ MEDIA

*SPECIFICATION AMENDMENTS*

Delete the current "Summary of the Invention" section of the application including the text beginning "Summary of the Invention" on page 3 and ending "...having any desired shape." on page 6 and substitute the following replacement section:

**Summary of the Invention**

In accordance with one aspect of the invention, a method of forming a porous medium may comprise applying pressure to a first portion of a medium precursor including inorganic particles and separately applying pressure to a second portion of the medium precursor. The first portion and the second portion of the medium precursor are pressed along a common axis. The method further comprises sinter bonding the inorganic particles together to form a porous medium having a porosity of about 50% or more.

In accordance with another aspect of the invention, a method of forming a porous medium may comprise depositing a medium precursor including inorganic particles into a mold cavity. The method also comprises moving a first die against a first portion of the medium precursor in the mold cavity and moving a second die against a second portion of the medium precursor in the mold cavity. The first and second dies are moved along a common axis. The method further comprises sinter bonding the inorganic particles together to form a porous medium having a porosity of about 50% or more.

In accordance with another aspect of the invention, a method of forming a porous medium may comprise depositing a medium precursor including inorganic particles into a mold cavity. The method also comprises displacing a first die and a second die along a common axis against first and second portions, respectively, of the medium precursor in the mold cavity. The method further comprises terminating the axial displacement of the first and second dies. The medium precursor remains in the mold cavity until after the axial displacement of the first and second dies is terminated. The method further comprises sinter bonding the inorganic particles together to form a porous medium having a porosity of about 50% or more.

Methods according to various aspects of the invention can produce a high-quality filter medium having any desired shape. By separately pressing individual portions of the medium precursor, the compression of each individual portion of the filter medium precursor can be maximized or tailored to predetermined specifications.